

AMENDMENTS TO THE CLAIMS:

For claims not marked as “Currently Amended” in this response, any difference in the claims below and the previous state of the claims is unintentional and in the nature of a typographical error. Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1. (Currently Amended) A method to be performed by a UE (user equipment), ~~for said UE in P2P communication mode to perform cell handover~~, comprising steps of:
 - (a) detecting downlink signals of the an active cell in which said UE is camping and its adjacent cells;
 - (b) judging whether there exists a suitable cell whose link performance is a predefined value higher than that of said active cell, according to the detecting result;
 - (c) sending a detection report message to a network system to start a judging procedure of said network system if there exists said suitable cell, and said judging procedure deciding whether said UE and another UE in P2P communication can handover into said suitable cell to continue P2P communication.

2. (Currently Amended) The method of claim 1, wherein step (b) said judging includes:
 - (b1) judging whether there exist candidate cells whose link performance can meet the requirement for communication quality in said adjacent cells, according to the ~~detecting~~ result of detecting downlink signals;
 - (b2) judging whether there exists said suitable cell in the candidate cells if there exist the candidate cells.

3. (Currently Amended) The method in claim 2, further comprising:
sending a report message ~~about~~ about candidate cells to said network system to report said decided candidate cells to said network system.
4. (Previously Presented) The method in claim 1, further comprising:
receiving a cell handover command from said network system;
establishing a P2P connection with said another UE in said suitable cell.
5. (Currently Amended) The method in ~~claim4~~ claim 4, further comprising:
releasing the P2P connection in said active cell;
sending a message for completing cell handover to said network system.
6. (Previously Presented) The method in claim 1, further comprising:
receiving a detection control message from said network system;
sending a detection report message about the link performance of said active cell to said network system, according to the detection control message.

7. (Currently Amended) A method to be performed by a network system, for ~~two UEs~~ first and second user equipment (UE) in P2P communication mode to perform cell handover, comprising steps of:

receiving a detection report message from ~~any~~ UE one of said ~~two~~ Ues first and second UEs, indicating that said one UE detects there exists a suitable cell in the adjacent cells of ~~its~~ an active cell, and the where a link performance of said suitable cell is a predefined value higher than that of ~~its~~ said active cell; and

~~staring~~ starting a judging procedure to decide whether ~~two~~ UEs first and second UEs can handover into said suitable cell to continue P2P communication.

8. (Currently Amended) The method in claim 7, ~~wherein step (b) includes~~ further comprising:

~~judging whether the a~~ link performance of another UE of said ~~two~~ UEs first and second UEs ~~in said suitable cell~~ can meet the ~~a~~ requirement for communication quality in said suitable cell.

9. (Currently Amended) The method in claim 8, further comprising:

establishing ~~a~~ signaling link between said ~~two~~ UEs first and second UEs if the requirement for communication quality is met;

sending a cell handover command to said ~~two~~ UEs first and second UEs so that said ~~two~~ UEs first and second UEs can establish P2P connection in said suitable cell.

10. (Currently Amended) The method in claim 8, further comprising:
 - checking the link performance of said another UE in said active cell if the requirement for communication quality can't cannot be met;
 - judging whether the link performance of said two UEs first and second UEs in said active cell can meet the requirement for communication quality;
 - sending a command for maintaining P2P communication to said two UEs first and second UEs so that said two UEs first and second UEs can continue P2P communication in said active cell if the link performance of said two UEs first and second UEs in said active cell both can meet the requirement for communication quality.
11. (Currently Amended) The method in claim 10, further comprising:
 - sending a command for switching to conventional communication mode to said two UEs first and second UEs so that said two UEs first and second UEs can switch to conventional mode from P2P mode if the link performance of at least one of said two UEs first and second UEs in said active cell can't cannot meet the requirement for communication quality.
12. (Previously Presented) The method in claim 10, wherein step includes:
 - sending a detection control message to said another UE, to request said another UE to send detection report about the link performance of said active cell;
 - receiving said detection report from said another UE;
 - checking the link performance of said another UE in said active cell according to said detection report.

13. (Currently Amended) The method in claim 7, further comprising:

receiving a report message about the candidate cells to any UE of said ~~two~~ UEs first and second UEs, the report message indicating that said one UE detects the link performance of an adjacent cell of its said active cell can meet the requirement for communication quality;

marking each candidate cell of said one UE according to the report message.

14. (Currently Amended) A UE (user equipment), comprising:

a detecting unit, for detecting downlink signals of said UE in said an active cell and its adjacent cells;

a judging unit, for judging whether there exists a suitable cell whose link performance is a predefined value higher than that of said active cell, according to the detection result; and

a sending unit, for sending a detection report message to a network system to start a judging procedure of said network system when there exists said suitable cell, wherein said judging procedure decides whether said UE and another UE in P2P communication can handover into said suitable cell to continue P2P communication[[;]].

15. (Original) The UE in claim 14, further comprising:

a receiving unit, for receiving a cell handover command from said network system;

an establishing unit, for establishing a P2P connection with said another UE in said suitable cell.

16. (Currently Amended) A network system, comprising:

a receiving unit, for receiving a detection report message from any user equipment (UE) of said two UEs, the detection report message indicating that said UE detects there exists a suitable cell in the adjacent cells of its an active cell, and the link performance of said suitable cell is a predefined value higher than that of its said active cell;

a judging unit, for starting a judging procedure to decide whether said two UEs can handover into said suitable cell to continue P2P communication, wherein said judging unit is for judging whether the link performance of another UE of said two UEs in said suitable cell can meet the a requirement for communication quality.

17. (Original) The network system in claim 16, further comprising:

an establishing unit, for establishing signaling link for said two UEs when said judging unit judges that the requirement for communication quality is met;

a sending unit, for sending a cell handover command to said two UEs so that said two UEs can establish P2P connection in said suitable cell.

18. (Currently Amended) The network system in claim 17, further comprising:

 a detecting unit, for checking the link performance of said another UE in said active cell when said judging unit judges that the requirement for communication quality ~~can't~~ cannot be met[;],

 said judging unit, ~~for~~ judging whether the link performance of said two UEs in said active cell can meet the requirement for communication quality[;], and

 said sending unit, ~~for~~ sending a command for maintaining P2P communication to said two UEs so that said two UEs can continue P2P communication in said active cell when the link performance of said two UEs in said active cell both can meet the requirement for communication quality.

19. (Newly Added) The network system in claim 17 wherein the sending unit is capable of sending a command to release the P2P connection in said active cell.

20. (Newly Added) The network system in claim 19 wherein the sending unit is capable of sending a message for completing cell handover to said network system.